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SASINOWSKI, ANDREW				
ART UNIT		PAPER NUMBER		
4163				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

### Office Action Summary

**Application No.**

10/549,644

**Applicant(s)**

KOPPERS ET AL.

**Examiner**

ANDREW J. SASINOWSKI

**Art Unit**

4163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-85/86)  
Paper No(s)/Mail Date 7/31/2007  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 through 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the phrase "and/or", and it is unclear whether the broad or the narrow interpretation is claimed.

Claim 5 recites the broad recitation "...the long marks have lengths of at least 6 T", and the claim also recites "...the long marks have lengths of at least 6 T, in particular being in the range of 8 T to 14 T." which is the narrower statement of the range/limitation.

Claims 2 through 7 are rejected under the same grounds as they are dependent on claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et. al. [EP 1,184,852] in view of Oostveen et. al. [US 2002/0031064].

Regarding claim 1, Kato teaches a record carrier of a writable type [0001] for recording information by writing marks in a track on a recording layer via a beam of radiation [fig. 5, item B as well as section 0040] entering through an entrance face of the record carrier [fig. 9, items 201 and 206] and constituting a scanning spot having an effective diameter [fig. 2] on the track, the marks having lengths corresponding to an integer number of channel bit lengths T [0060] and the shortest marks having a length of a predefined minimum number d of channel bit lengths T [0060] for being detectable via the scanning spot having said effective diameter, the recording layer comprising a pregroove for indicating the track [claim 1], the pregroove exhibiting a wobble

constituted by displacements of the pregroove in a direction transverse to the longitudinal direction of the track [fig. 6], the long marks having lengths of at least two times the predefined minimum number  $d$  of channel bit lengths  $T$  for being substantially longer than the effective diameter of the scanning spot [0060], and the carrier pattern constituting a focus area at a predefined location on the recording layer [0002, note that while this is given as prior art, having an initial focus area on a optical disc is an inherent element].

However, Kato does not teach a record carrier wherein the pregroove comprising a pregroove modulation of the depth and/or width of pregroove areas for constituting a carrier pattern containing long marks.

Oostveen teaches a record carrier wherein the pregroove comprising a pregroove modulation of the depth and/or width of pregroove areas for constituting a carrier pattern containing long marks [fig. 1b].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the pregroove modulation taught by Oostveen with the record carrier taught by Kato because doing so would provide a predictable result, namely that extra data could be stored by modulating the pregroove.

Regarding claim 2, Kato in view of Oostveen teach the record carrier as taught in claim 1.

Furthermore, Oostveen teaches a record carrier wherein the pregroove modulation comprises pregroove land areas of zero depth alternating with pregroove pit

areas of a predefined depth and width for constituting said carrier pattern [0037, also see fig. 1b]

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the pregroove modulation pattern taught by Oostveen with the record carrier taught by Kato because doing so would provide a predictable result, namely that extra data could be stored by modulating the pregroove by using alternate areas of pits and lands.

Regarding claim 5, Kato in view of Oostveen teach the record carrier as taught in claim 1.

Furthermore, Kato teaches a record carrier wherein the predefined minimum number  $d$  is 3 channel bit lengths  $T$  ( $d = 3T$ ) [0060], and the long marks have lengths of at least  $6T$  [0060], in particular the lengths being in the range of  $8T$  to  $14T$ .

Regarding claim 7, Kato in view of Oostveen teach the record carrier as taught in claim 1.

Furthermore, Oostveen teaches a record carrier wherein the pregroove modulation is representing additional information encoded by the long marks according to a predefined channel coding algorithm [0001, "...first variations caused by the existence or nonexistence of information marks along the track...the information marks are for example in the form of pits."], which predefined channel coding algorithm differs from a channel coding algorithm representing said recorded information [0001 "...second variations are in the form of variations in the radial position."].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the pregroove modulation taught by Oostveen with the record carrier taught by Kato because doing so will produce predictable results, namely that two separate types of information will be encoded in the pregroove.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Oostveen, as applied to claim 1 above, and further in view of Yoon et. al [US 2003/0002420].

Regarding claim 3, Kato in view of Oostveen teach the record carrier as claimed in claim 1, and further claim a recording layer having a focus pattern [Kato, 0002].

However, Kato in view of Oostveen do not teach a record carrier wherein the record carrier comprises at least a first recording layer and a second recording layer, the first recording layer being present at a position closer to the entrance face than the second recording layer, and each recording layer having the focus pattern.

Yoon teaches a record carrier wherein the record carrier comprises at least a first recording layer [fig. 2, item L0, note that while it is given as prior art, Yoon teaches an improvement to an optical disc having this same structure] and a second recording layer [fig. 2, item L1], the first recording layer being present at a position closer to the entrance face than the second recording layer [fig. 2, note that one of the two recording layers will inherently be closer to the entrance face than the other], and each recording layer having the focus pattern [claim 19, note that Yoon describes the element as a 'synchronization area', which inherently has the same function].

It would have been obvious to one with ordinary skill in the art at the time of invention to combine the two layer record carrier taught by Yoon with the record carrier featuring a focus pattern taught by Kato in view of Oostveen because doing so would provide a predictable result, namely that the laser beam could be refocused when switching from reading one layer to another layer.

Regarding claim 4, Kato in view of Oostveen and in further view of Yoon teach the record carrier as taught in claim 3.

Kato in view of Oostveen do not teach a record carrier wherein each recording layer comprises the focus pattern at a substantially corresponding radial position.

Yoon teaches each recording layer comprises the focus pattern at a substantially corresponding radial position [fig 2, item 10, note that while this is given as prior art, Yoon does not change this record carrier structure in his invention].

It would have been obvious to one with ordinary skill in the art at the time of invention to combine the radial positioning taught by Yoon with the record carrier taught by Kato in view of Oostveen because doing so would result in a predictable result, namely the laser could be positioned on the same physical location on the carrier and lead the lead-in area of a specific layer by a change in focus.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Oostveen, as applied to claim 1 above, and further in view of Isaka [US 5,168,488].

Kato in view of Oostveen teach the record carrier as taught in claim 1, including the carrier pattern containing long marks.



However, Kato in view of Oostveen do no teach a record carrier wherein the carrier pattern substantially only contains said long marks.

Isaka teaches a record carrier with a pattern that consists substantially of long marks [fig. 3, also col. 3, lines 3-7]

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the pattern with long marks taught by Isaka with the record carrier taught by Kato in view of Oostveen because doing so would provide a predictable result, namely that the carrier pattern could be recognized by the frequent appearance of long marks.

7. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Oostveen, and further in view of Takahashi [US 5,142,517].

Regarding claim 8, Kato teaches a record carrier of a writable type [0001] for recording information by writing marks in a track on a recording layer via a beam of radiation [fig. 5, item B as well as section 0040] entering through an entrance face of the record carrier [fig. 9, items 201 and 206] and constituting a scanning spot having an effective diameter [fig. 2] on the track, the marks having lengths corresponding to an integer number of channel bit lengths T [0060] and the shortest marks having a length of a predefined minimum number d of channel bit lengths T [0060] for being detectable via the scanning spot having said effective diameter, the recording layer comprising a pregroove for indicating the track [claim 1], the pregroove exhibiting a wobble constituted by displacements of the pregroove in a direction transverse to the longitudinal direction of the track [fig. 6], the long marks having lengths of at least two

times the predefined minimum number  $d$  of channel bit lengths  $T$  for being substantially longer than the effective diameter of the scanning spot [0060], and the carrier pattern constituting a focus area at a predefined location on the recording layer [0002, note that while this is given as prior art, having an initial focus area on a optical disc is an inherent element].

However, Kato does not teach a record carrier wherein the pregroove comprising a pregroove modulation of the depth and/or width of pregroove areas for constituting a carrier pattern containing long marks.

Oostveen teaches a record carrier wherein the pregroove comprising a pregroove modulation of the depth and/or width of pregroove areas for constituting a carrier pattern containing long marks [fig. 1b].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the pregroove modulation taught by Oostveen with the record carrier taught by Kato because doing so would provide a predictable result, namely that extra data could be stored by modulating the pregroove.

Kato additionally teaches a device comprising focus servo means [Fig. 9, element 216] for focusing the beam on the track for constituting said scanning spot.

Oostveen additionally teaches a device for scanning a track on a record carrier [abstract], the device comprising a head for providing the beam [0002, note that the Oostveen use of a laser for scanning a record carrier would inherently require a head to provide the scanning beam], and a front-end unit for generating a scanning signal for detecting marks in the track [claim 1]].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the elements of the device taught by Oostveen with the elements of the device taught by Kato because doing so would provide a predictable result, namely a device that could scan data from a record carrier.

However, Kato in view of Oostveen does not teach a device wherein there is a focus adjustment unit for locating the focus area and for adjusting the focus servo means in dependence on amplitude of the scanning signal due to the carrier pattern during scanning the focus area.

Takahashi does teach a device wherein there is a focus adjustment unit for locating the focus area and for adjusting the focus servo means in dependence on amplitude of the scanning signal due to the carrier pattern during scanning the focus area [abstract].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the focus adjustment unit taught by Takahashi with the device taught by Kato in view of Oostveen because doing so would provide a predictable result, namely that the laser beam will be optimally focused on the record carrier during any reproducing operation.

Regarding claim 11, Kato in view of Oostveen in further view of Takahashi teach the device as taught in claim 8.

Furthermore, Oostveen teaches a device wherein the device comprises a pregroove demodulation unit for retrieving, from the scanning signal, additional information encoded in the pregroove modulation according to a predefined channel

coding algorithm, which predefined channel coding algorithm differs from a channel coding algorithm representing said recorded information [claim 2].

It would have been obvious at the time of invention by one with ordinary skill in the art to combine the pregroove demodulation unit taught by Oostveen with the device taught by Kato in view of Oostveen in further view of Takahashi because doing so would provide a predictable result, namely that the pregroove modulation on the record carrier would be demodulated and therefore read by the record carrier device.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Oostveen in further view of Takahashi, as applied to claim 8 above, and further in view of Yoon.

Kato in view of Oostveen in further view of Takahashi teach the device as claimed in claim 8.

Furthermore, Takahashi teaches a device wherein the device locates the focus area and adjusting the focus servo means in dependence on amplitude of the scanning signal due to the carrier pattern during scanning the focus area of the respective layer [abstract].

However, Kato in view of Oostveen in further view of Takahashi do not teach a device wherein the focus servo means are arranged for focusing on one of at least a first recording layer and a second recording layer in the record carrier, the first recording layer being present at a position closer to the entrance face than the second recording layer, and each recording layer having the focus pattern, and the focus adjustment unit being arranged for each recording layer separately.

Yoon teaches a device wherein the focus servo means are arranged for focusing on one of at least a first recording layer [fig. 2, item L0] and a second recording layer [fig. 2, item L1] in the record carrier, the first recording layer being present at a position closer to the entrance face than the second recording layer [fig. 2], and each recording layer having the focus pattern and the focus adjustment unit being arranged for each recording layer separately [claim 19, note that since each layer has a different focus pattern, each layer will inherently require its own focus adjustment arrangement].

It would have been obvious at the time of invention to combine the focus means taught by Yoon with the device taught by Kato in view of Oostveen in further view of Takahashi because doing so would provide a predictable result, namely that a record carrier reading device would be able to optimize focus of each layer of a multi-layer disk.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Oostveen in further view of Takahashi, as applied to claim 8 above, and further in view of Spruit et. al. [US 5,978,351].

Kato in view of Oostveen in further view of Takahashi teach the device as claimed in claim 8.

However, Kato in view of Oostveen in further view of Takahashi do not teach a device wherein the focus adjustment unit is arranged for writing a focus test pattern and for further adjusting the focus servo means in dependence on jitter or errors detected during subsequently reading said test pattern.

Spruit does teach device wherein the focus adjustment unit is arranged for writing a focus test pattern and for further adjusting the focus servo means in dependence on jitter or errors detected during subsequently reading said test pattern [col. 1, lines 50-62].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the device taught by Spruit with the device taught by Kato in view of Oostveen in further view of Takahashi because doing so would provide a predictable result, namely that the device would be able to adjust the focus servo for each individual record carrier inserted in the device based on test pattern results.

#### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1 and 3 through 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 12 through 23 of copending Application No. 2007/0008840 (Martens et. al). Although the conflicting claims are not identical, they are not patentably distinct from each other because the phrase "focus marks" is exchanged with "long marks" at the end of the third paragraph of claim 1. While phrased differently, this element performs the same function in each invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claim 2 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Marten et. al. as mentioned above, in further view of Oostveen et. al. [US 2002/0031064].

Martens teaches all the limitations of claim 1.

However, Martens does not teach a record carrier wherein the pregroove modulation comprises pregroove land areas of zero depth alternating with pregroove pit areas of a predefined depth and width for constituting said carrier pattern.

Oostveen teaches a record carrier wherein the pregroove modulation comprises pregroove land areas of zero depth alternating with pregroove pit areas of a predefined depth and width for constituting said carrier pattern [0037].

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the specific pregroove modulation pattern taught by Oostveen with the record carrier taught by Martens because doing so would have a predictable result, namely that the carrier pattern would be encoded into a pregroove modulation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW J. SASINOWSKI whose telephone number is (571)270-5883. The examiner can normally be reached on Monday to Friday, 7:30 to 5:00, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on (571)272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 4165

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJS

/Lynda Jasmin/  
Supervisory Patent Examiner, Art Unit 4165